

**UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF WISCONSIN**

FELDMANN ENGINEERING &
MANUFACTURING CO., INC.,

Plaintiff,

v.

ARDISAM, INC.,

Defendant.

Case No.: 14-cv-727-jdp

**ARDISAM, INC.'S MEMORANDUM IN SUPPORT OF MOTION FOR SUMMARY
JUDGMENT**

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INTRODUCTION

The purported inventor of the '188 patent faced a problem: the plunger valve in a carburetor for a propane engine was binding or wedging, leading to engine failure. Like another carburetor in the art that was used with propane engines, the plunger valve in question had three flutes, or ribs, which acted to align the plunger valve as it moved back and forth within a sleeve. So, just as one might add a fourth leg to a stool to increase stability, the inventor took the common-sense approach of adding a fourth flute to the plunger valve. While this step, unsurprisingly, resolved the binding issue, it was by no means inventive, as four-fluted plunger valves had previously been used in carburetors for gasoline engines, and, in any event, it was obvious to try adding the fourth flute to address the problem presented. Accordingly, because there were a finite number of predictable solutions resulting in the claimed invention, a finding of obviousness is compelled. *See, e.g., KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 421 (2007). And, as Feldmann has identified no evidence disrupting this mandated result, summary judgment must follow.

BACKGROUND¹

I. The Parties.

Defendant Ardisam, Inc. (“Ardisam”) is a privately held Wisconsin company that designs and manufactures products for lawn and garden, hunting, ATVs, and fishing, including ice fishing. DPFOF 1-2. Within the fishing category, Ardisam offers ice augers, which are devices ice fishermen use to drill holes in the ice. DPFOF 2-3. Ardisam’s ice augers include manual, gasoline, and propane ice augers. DPFOF 4. Both gasoline and propane augers are powered by

¹ In support of this motion, Ardisam files herewith Defendant Ardisam, Inc.’s Proposed Findings of Fact (“DPFOF”), the Declaration of Truscenialyn Brooks in Support of Defendant’s Motion for Summary Judgment (“Brooks Decl.”), and the Declaration of David E. Foster (“Foster Decl.”).

a combustion engine. DPFOF 5 (*see* ECF No. 29 (Expert Report of David E. Foster (“Foster Report”), ¶¶ 14-17)).

Plaintiff Feldmann is a Wisconsin corporation that also manufactures and sells ice augers. DPFOF 6. It is the assignee of United States Patent No. 8,777,188 (“the ’188 patent” or “patent-in-suit”), titled “plunger valve for a propane carburetor.” DPFOF 7. Feldmann’s CEO, Clifford Feldmann, is the purported inventor of the ’188 patent. DPFOF 8.

II. The ’188 Patent.

Feldmann’s ’188 patent issued on July 15, 2014, from an application filed on August 30, 2013, which claims priority to provisional application No. 61/695,226, filed on August 30, 2012. DPFOF 13. The ’188 patent is a continuation-in-part of patent application No. 12/983,795, filed on January 3, 2011, which claims priority to a provisional patent application (No. 61/291,991), filed on January 4, 2010. DPFOF 14. As described in more detail below, the patent is directed to a fluted plunger valve (specifically, a four-fluted plunger valve) used in the carburetor of a combustion engine. DPFOF 15. It does not claim an ice auger or even a carburetor used at specific temperatures. DPFOF 16-17. Thus, the general field of carburetors and plunger valves informs any discussion of the ’188 patent.

A. Carburetor Structures and Operation.

The purpose of carburetors is to mix a desired amount of air and fuel, and supply that mixture to an internal combustion engine. DPFOF 52. To accomplish this, all carburetors generally include a fuel intake, where fuel enters the carburetor from an external source (e.g., a gasoline or propane tank); a fuel chamber, which stores a certain amount of fuel prior to being mixed with air; an air intake, where air enters the carburetor; a throat (or “mixing chamber”), where the fuel and air are mixed; and an air/fuel outlet, where the mixture exits the carburetor on its way to the engine. DPFOF 53. As air enters the carburetor, it flows through a narrowing

diameter in the throat, known as the venturi, which increases its speed, decreases its pressure, and permits fuel to flow from the fuel chamber into the throat, where the air and fuel are mixed. DPFOF 54.

Various mechanisms and features can be utilized to control and customize how fuel is delivered from an external fuel source into the fuel chamber. DPFOF 55. A plunger valve is one known mechanism. DPFOF 55-56. Specifically, a plunger valve opens to allow fuel into the reservoir, and closes to shut off the flow of fuel when it reaches a desired level, or pressure, within the reservoir. DPFOF 55-57. The following photographs, taken from the Dekni 2004 prior art reference (“Dekni 2004”)² discussed below, depict a typical plunger valve, such as the plunger valve disclosed and claimed in the ’188 patent. DPFOF 59.



Dekni 2004 Fuel-Metering Plunger Valve

Top row, from left to right: Plunger length view, axial view showing four flutes, applied tip-pressure view.

Bottom row, from left to right: Sleeve with conical seat and fuel inlet port, plunger inserted into sleeve.

² The Dekni 2004 prior art reference refers to a carburetor made by Dekni bearing model number PD24 J and serial number BF00UD11, used in a model year 2004 gasoline-powered go cart. DPFOF 58, 117. The original device is being maintained by counsel for Ardisam, and representative photos are attached as Exhibit 18 to the Foster Report. See ECF No. 29-19 (Exhibit 18 to Expert Report of Dr. David E. Foster).

As can be seen from the photographs above, a typical plunger valve includes a shaft (i.e., “needle” or “plunger”) that rides in and out of a sleeve, and a seat and inlet hole at the end of the sleeve where fuel from an external fuel source can enter the carburetor. DPFOF 60. When the plunger is pushed all the way into the sleeve, it blocks the flow of fuel through the inlet port. DPFOF 61. As the plunger moves out of the sleeve, the inlet port becomes unblocked and fuel can flow into the carburetor. DPFOF 62.

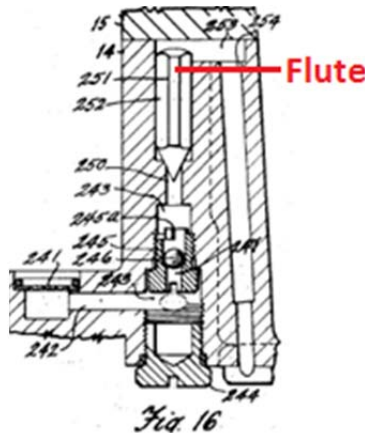
In order to prevent the plunger from moving laterally while going in and out of the sleeve, there cannot be too large a gap between the outside diameter of the plunger and the inside diameter of the sleeve. DPFOF 65. However, as this gap becomes smaller, the flow of fuel into the inlet hole and past the plunger valve is restricted, hampering the ability to quickly supply fuel to the carburetor (or any other device utilizing a plunger valve to regulate fuel intake). DPFOF 66. To remedy this problem, protrusions (also called ribs or flutes) are often included on the plunger (such as the four longitudinal flutes seen in the photographs of Dekni 2004 above), which create open recesses for fuel to flow while still providing a tight fit between the outer walls of the plunger and the inner walls of the sleeve. DPFOF 66-67.



Dekni 2004 fuel-metering plunger inserted into sleeve.

Use of features such as ribs or flutes on plungers, including plungers used in carburetors, is a common and long-standing practice. Indeed, carburetors having plungers with flutes are

nearly as old as carburetors themselves, as seen below on a carburetor design for an automotive engine from 1952. DPFOF 68.



Olson '694, Fig. 16

B. Flutes Are Common in High Performance Applications to Increase Precision.

Flutes on plunger valves are often used (and have been for quite some time) in high performance applications, for example, where a higher level of precision is desired. DPFOF 74. The greater the number of flutes in the plunger valve, the greater the precision. *See* DPFOF 28; 67; 74; 211; 29.

Moreover, fluted plungers are not unique to carburetors for large engines (e.g., automobiles), nor to gasoline or liquid fuel applications. For example, in 2009, Lehr produced a propane-powered handheld string trimmer with a carburetor that used a plunger with three flutes. DPFOF 69. Lehr's three-fluted plunger had a body-length of approximately 16.5 millimeters, as depicted below. DPFOF 69.





Lehr 2009 Plunger

Top, from left to right: Plunger length view, axial view showing three flutes.

Gasoline carburetors have likewise employed a multi-fluted plunger of a similar length. *See* DPFOF 142-143. This is illustrated by the Dekni prior art. Dekni 2004 is a prior art carburetor bearing model number PD24J and serial number BF00UD11, which was used in a model year 2004 gasoline-powered go cart. DPFOF 58, 117. It was publically available as early as 2004.³ DPFOF 117. The Dekni 2004 carburetor included a four-fluted plunger having a length of approximately 16.5 millimeters. DPFOF 121-123.

Additional prior art devices similarly contain three- or four-fluted plunger valves with similar lengths. *See* DPFOF 142-143.

C. The Specification and Claims of the '188 Patent.

The '188 patent purports to address, *inter alia*, the need for accurate throttle control in an engine. DPFOF 21.⁴ This is achieved through the use of a four-fluted plunger valve of a specific length, either 13 to 20 mm or “approximately” 16.5 mm, depending on the claim. DPFOF 21. The patent defines “approximately” as “within 10%.” DPFOF 22.

³ While Feldmann has not challenged the prior art status of Dekni, it is without a doubt that the carburetor was available at least as early as 2009, thus qualifying as prior art to each claim of the '188 Patent. DPFOF 117.

⁴ While the patent specification also discusses the need for non-gasoline engines, and the need for carburetors that function at lower temperatures, neither of these alleged needs are claimed. DPFOF 20; *see also infra* Parts I.B. & II.D.2.a. That is, the claims of the patent-in-suit are not limited by fuel or temperature, as discussed herein.

According to the specification, the claimed number of flutes (at least four) and length of valve were determined based on “extensive” testing. DPFOF 27. The specification explains that this testing revealed that the number of flutes was “critical to proper operation,” as plungers with only three flutes experienced binding or wedging that could lead to engine failure. DPFOF 27-28. Testing showed that the addition of a fourth flute all but eliminated this binding issue. DPFOF 29.

While the patent title refers to a “propane” plunger valve, the specification makes clear that propane is only “exemplary” and that the invention can be used with “other fuel types, such as volatile hydrocarbons.” DPFOF 23. Volatile hydrocarbons include gasoline as well as propane. DPFOF 24. Consistent with this, claims 1-5 make no mention of any fuel source, while claims 6-20 reference propane only in conjunction with non-structural limitations. DPFOF 25-26, 36-51.

The patent includes three independent claims, claims 1, 6, and 16, and several dependent claims. DPFOF 18. Independent claim 1 (and its dependent claims 2-5) generally relate to a four-fluted plunger valve to be used in carburetors. DPFOF 30. These claims are not asserted in this action. *See infra* Part III. Independent claim 6 claims a carburetor with, *inter alia*, a four-fluted plunger valve that is 13-20 millimeters in length. DPFOF 32, 36 (’188 patent claim 6). Its dependent claims (7-15) add further limitations, for example, a “disk actuator.” DPFOF 33, 37-51.⁵ Finally, independent claim 16 and its dependent claims (17-20)⁶ also generally recite a carburetor with a four-fluted plunger valve that is “approximately 16.5 millimeters” in length. DPFOF 34-35, 47-51.

⁵ Because Feldmann does not dispute that the prior art discloses these limitations, Ardisam addresses these limitations in its Proposed Findings of Fact, filed herewith, rather than in its brief.

⁶ Because Feldmann also does not dispute that the prior art disclosed such limitations, Ardisam addresses these limitations in its Proposed Findings of Fact, filed herewith, rather than in its brief.

III. The Present Litigation

On October 24, 2014, Feldmann filed suit against Ardisam, alleging that Ardisam's manufacture and sale of its Eskimo brand propane ice augers willfully infringed the '188 patent. ECF No. 1. On December 5, 2014, Ardisam answered, denying infringement and asserting that the '188 patent is invalid. ECF No. 13. On January 9, 2015, discovery commenced.

On March 31, 2015, pursuant to the Court's scheduling order, Ardisam served the Expert Report of David E. Foster on invalidity. DPFOF 175. Days later, on April 8, 2015, Ardisam served a short supplement to that report. DPFOF 176 (ECF No. 30 (Supplemental Foster Report)). In these two reports, Ardisam established that each and every claim of the '188 patent was either anticipated or rendered obvious over the prior art. DPFOF 177. Indeed, Dr. Foster's report discloses a litany of prior art, and combinations of prior art, that teach each and every limitation of the '188 patent claims. DPFOF 177.

On April 30, 2015, Feldmann served its responsive expert report on validity. ECF No. 33 (The Responsive Expert Report of Dr. Marthinus van Schoor Regarding the Validity of Feldmann's '188 Patent ("van Schoor Report")). Feldmann's expert, Dr. Marthinus van Schoor, did not dispute that each and every limitation of the asserted claims was disclosed in the prior art. DPFOF 178. Rather, Dr. van Schoor disputed only that a skilled artisan would be motivated to combine these references, largely because some of the references are related to gasoline (and not propane). DPFOF 178-179.⁷ Dr. van Schoor further opined that one of skill in the art would have been discouraged by the prior art from using a four-fluted valve of the claimed length in a

⁷ Because there is no apparent dispute that all limitations of the asserted claims are present in the prior art, in the interest of judicial economy, Ardisam has not addressed this art in detail herein. Instead, it has detailed the prior art references (and their teaching) in its Proposed Findings of Fact, filed herewith, as detailed in the Court's summary judgment procedures.

propane carburetor. DPFOF 178-180. Dr. van Schoor was deposed on June 9, 2015. DPFOF 181.

As this invalidity discovery was underway, Ardisam sought discovery regarding Feldmann's claim that Ardisam's infringement was willful. On March 2, 2015, Ardisam served an Interrogatory requesting that Feldmann "[s]tate whether [it] contend[s] that Ardisam's purported infringement of the '188 Patent was willful, and if so, state with particularity the factual and legal basis for any such contention, and identify all documents in support of or against such contention." DPFOF 182. On April 14, 2015, Feldmann responded to Ardisam's interrogatory, but failed to identify any objective or subjective evidence that supported its claim of willful infringement. DPFOF 183. On April 17, 2015, Ardisam advised Feldmann of this shortcoming, and asked that Feldmann either supplement its response or confirm that it was not alleging willfulness in this litigation. DPFOF 184. The parties conferred on April 24, and Feldmann agreed to supplement its interrogatory response within two weeks. DPFOF 185.

On May 15, 2015, Feldmann supplemented its interrogatory response. DPFOF 186. Feldmann's response remained infirm, still failing to identify any subjective or objective evidence. Namely, as to subjective willfulness, Feldmann's only support for its willful infringement allegation was: (1) to cite to its Expert Report of Dr. Marthinus van Schoor on Infringement of U.S. Patent No. 8,77,108 [sic]; (2) to reiterate that Ardisam's carburetor infringes Feldmann's patent; (3) to note that Ardisam and Feldmann use the same supplier for carburetors; (4) to note that Ardisam was aware of the '188 patent no later than the date of the *filing of this litigation*; and (5) that Ardisam did not concede infringement until the day its non-infringement report was due. DPFOF 186-187.

As to objective willfulness, Feldmann noted only that Ardisam had “produced no prior art anticipating the asserted patent claims”; Feldmann did not address the objective reasonableness of Dr. Foster’s obviousness opinions and wholly ignored his anticipation opinion. DPFOF 186, 188.

As described above, both parties have now had the opportunity to state their positions on invalidity and willful infringement. Yet, despite ample opportunity, Feldmann’s validity defense and willfulness allegations are unsupported by any record evidence. Indeed, Feldmann has failed to cast doubt on Ardisam’s strong showing of anticipation and obviousness, or to present *any* evidence of either subjective or objective willfulness. Accordingly, given that there are no disputed issues of material fact, Ardisam is entitled to summary judgment of invalidity of the ’188 patent and of no willful infringement.

LEGAL STANDARDS

Summary judgment is proper when the moving party establishes that there is no genuine issue of material fact and that it is entitled to judgment as a matter of law. Fed. R. Civ. P. 56; *Celotex Corp. v. Catrett*, 477 U.S. 317, 323 (1986); *Perfect Web Tech., Inc. v. Infousa, Inc.*, 587 F.3d 1324, 1327 (Fed. Cir. 2009). “Material facts” are facts that “might affect the outcome of the suit,” and a material fact is “genuine” if the “evidence is such that a reasonable jury could return a verdict for the nonmoving party.” *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 248 (1986). Summary judgment is appropriate where a party has failed to make “a showing sufficient to establish the existence of an element essential to that party’s case, and on which that party will bear the burden of proof at trial.” *Celotex*, 477 U.S. at 322.

The party opposing summary judgment must set forth specific facts showing that there is a genuine issue for trial; it cannot merely rest upon allegations or denials of the moving party’s

pleading. Fed. R. Civ. P. 56(e). If the evidence opposing summary judgment “is merely colorable, or is not significantly probative, summary judgment may be granted.” *Anderson*, 477 U.S. at 249-50 (citations omitted); *Chem. Eng’g v. Essef Indus.*, 795 F.2d 1565, 1571 (Fed. Cir. 1986).

ARGUMENT

I. CLAIM 6 OF THE PATENT-IN-SUIT IS ANTICIPATED BY DEKNI.

A. A Claim Is Invalid as Anticipated Where Each and Every Limitation Is Found in a Single Piece of Prior Art.

A determination that a patent is anticipated under 35 U.S.C. § 102 requires that “each and every limitation is found either expressly or inherently in a single prior art reference.” *Celeritas Techs., Ltd. v. Rockwell Int.’l Corp.*, 150 F.3d 1354, 1361 (Fed. Cir. 1998). Anticipation involves a two-step analysis. First, the Court must construe the claims of the patent-in-issue. *Id.* After the claim terms have been construed, the Court must then compare the claims of the patent-in-suit to the prior art. *Id.* If all limitations of the properly construed claim are found in a single reference, that claim is anticipated. *See Upsher-Smith Labs., Inc. v. PamLab, L.L.C.*, 412 F.3d 1319, 1323 (Fed. Cir. 2005) (summary judgment of invalidity of the asserted claims was upheld as the prior art cited taught every element of the asserted claims of the patents-in-suit).

A patent challenger must show anticipation by clear and convincing evidence. *Liebel-Flarsheim Co. v. Medrad, Inc.*, 481 F.3d 1371 (Fed. Cir. 2007). Anticipation is a question of fact. *In re Montgomery*, 677 F.3d 1375, 1379 (Fed. Cir. 2012). Where there are no material disputes regarding the disclosures of the prior art, summary judgment of anticipation is appropriate. *Liebel-Flarsheim Co.*, 481 F.3d at 1381 (finding that summary judgment was appropriate even though the burden of showing invalidity was especially difficult because the prior art asserted was before the PTO); *WM Wrigley JR. Co. v. Cadbury Adams USA LLC*, 683

F.3d 1356, 1362 (Fed. Cir. 2012) (granting summary judgment of invalidity due to both anticipation and obviousness); *IPXL Holdings, L.L.C. v. Amazon.com, Inc.*, 430 F.3d 1377, 1383 (Fed. Cir. 2005) (granting summary judgment of anticipation over a reference that had been reviewed by the patent examiner).

B. Dekni Discloses All Limitations of Claim 6.

As noted above, Dekni 2004 is a prior art carburetor that was used in a gasoline-powered go cart. DPFOF 58, 117. Dekni includes a four-fluted plunger having a length of “approximately” 16.5 millimeters and a conical tip made of soft deformable material that fits into a matching, conically shaped seat, operated by a float-style fuel chamber. DPFOF 189. Indeed, Dr. Foster has explained (and Dr. van Schoor did not dispute in his report) that Dekni includes all limitations of claim 6. DPFOF 190-191; 117-129; *see also* DPFOF 140-147. Indeed, the sole distinction between Dekni and claim 6 relied upon by Feldmann (in chart form only⁸) is that Dekni does not anticipate claim 6 because Dekni is not a *propane* carburetor. *See* DPFOF 192. But as described below, propane is not a limitation of claim 6. Indeed, while claim 6 includes the word “propane” in both the preamble and the claim, in each instance propane is recited merely as an intended use of the claim and is not a structural requirement.

It is blackletter law that an intended use is not a limitation. *See* Manual of Patent Examining Procedure § 2114 (“A claim containing ‘recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus’ if the prior art apparatus teaches all the structural elements of the claim.”) (quoting *Ex parte Masham*, 2 U.S.P.Q. 2d 1647 (Bd. Pat. App. & Inter. 1987)); *see also Apple Computer, Inc. v. Articulate Sys., Inc.*, 234 F.3d 14, 22 (Fed. Cir. 2000) (recitation of limitation windows

⁸ Indeed, the sum total of Feldmann’s opinion on lack of anticipation is a single paragraph, referencing a chart allegedly summarizing Dr. Foster’s anticipation opinion. *See* van Schoor Report at 21. Beyond this perfunctory reference, no further information is given. *See id.*

containing “data” found in preamble and in body of claim non-limiting where preamble did not serve to define invention). As to the preamble, the general rule is that a preamble does not limit claims. *See, e.g., Catalina Mktg. Int’l, Inc. v. Coolsavings.com, Inc.*, 289 F.3d 801, 808-09 (Fed. Cir. 2002). This is because the patentability of an apparatus claim (such as the claims in the ’188 patent) depends “on the claimed structure, not on the intended use or purpose of that structure.” *Id.* at 809.

Thus, where the claim itself recites a structurally complete invention, the law is clear that the preamble is not limiting; the intended use or purpose of the invention is not a limitation of the claim. *See, e.g., Catalina Mktg. Int’l, Inc.*, 289 F.3d at 809 (“[P]reamble language merely extolling benefits or features of the claimed invention does not limit the claim scope without clear reliance on those benefits or features as patentably significant.”) (citing *STX, LLC v. Brine, Inc.*, 211 F.3d 588, 591 (Fed. Cir. 2000); *Bristol-Myers Squibb Co. v. Ben Venue Labs., Inc.*, 246 F.3d 1368, 1375 (Fed. Cir. 2001)); *see also Ex parte Masham*, 2 USPQ2d 1647 (1987); Manual of Patent Examining Procedure § 2113. Accordingly, absent, for example, some other reliance on the preamble in the specification, file history, or claim body to define the invention, the preamble will not be imported into the properly construed claims. *Catalina Mktg. Int’l, Inc.*, 289 F.3d at 810.

Here, the use of the term “propane” in claim 6 is merely an intended use of the device for at least three reasons. First, claim 6 recites a structurally complete invention absent reference to the propane carburetor—reciting each component of the claimed carburetor. DPFOF 46. Second, the specification does not make propane a required feature of the invention. Rather, the patent is express that “although propane is treated as exemplary herein, the propane carburetor and any other parts in the specification and the claims can be used with other fuel types.”

DPFOF 193. Thus, while propane may “offer a number of benefits over other fuels” (col. 4 ll. 21-22), the specification is express that (and one of ordinary skill in the art would understand that) propane is merely one implementation of the invention. DPFOF 194. Finally, the applicants did not distinguish the invention based on the use of propane during prosecution of the ’188 patent. DPFOF 195. To the contrary, the USPTO expressly found that propane was merely an intended use in both the parent ’795 application (DPFOF 196) and in a subsequent, pending continuation application. DPFOF 197.

Nor can claim 6’s subsequent reference in the body of the claim to a “propane intake” salvage the ’188 patent. Such functional language—which again merely states a functional use for the claimed structure (e.g., the intake of propane)—cannot be used to distinguish the ’188 patent from prior art containing the same structural limitations. *See* Manual of Patent Examining Procedure § 2114 (“A claim containing ‘recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus’ if the prior art apparatus teaches all the structural elements of the claim.”) (quoting *Ex parte Masham*, 2 U.S.P.Q. 2d 1647); *see also Apple Computer, Inc.*, 234 F.3d at 22 (recitation of limitation windows containing “data” found in preamble and in body of claim non-limiting where preamble did not serve to define invention). Accordingly, because the structure of Dekni includes all of the elements recited in claim 6 of the ’188 patent, it is irrelevant whether the claimed apparatus functions in conjunction with propane or with a different fuel. *In re Matter of the Application of James H. Casey*, 370 F.2d 576, 579 (C.C.P.A. 1967) (finding claims invalid where the difference between the claims and the prior art “reside[d] in the use” of the two devices). DPFOF 36; 198; 139-145; 117-129.

Thus, claim 6 of the '188 patent cannot evade anticipation by the Dekni art by relying on the intended use of propane in the claimed structure. Having failed to dispute that all structural limitations of claim 6 were disclosed in the Dekni reference (DPFOF 36; 117; 139-145; 177-178; 191), the claims are invalid as anticipated. *See, e.g., Upsher-Smith Labs, Inc. v. PamLab, L.L.C.*, 412 F.3d 1319, 1322-24 (Fed. Cir. 2005) (affirming a district court's determination of anticipation where the assignee conceded that the prior art contained nearly every element of the asserted claims).

II. ALL ASSERTED CLAIMS OF THE '188 PATENT ARE OBVIOUS OVER THE PRIOR ART.

Even if claim 6 were not anticipated by Dekni, *all* asserted claims of the '188 patent would have been obvious over combinations of the prior art. Indeed, Feldmann does not dispute that the prior art teaches all limitations of the asserted claims, or that the Lehr 2009 propane carburetor included a plunger valve having a body of the claimed length with three flutes. Feldmann's defense of the '188 patent's validity rests on two theories: (1) that prior art gasoline carburetors are not relevant to propane carburetors, particularly when used at cold temperatures; and (2) that a skilled artisan would not have been motivated to add a fourth flute to a propane plunger valve of the claimed lengths. *See* van Schoor Report at 15-18, 31-34. But, as shown below, gasoline and propane carburetor art reside in the same field of endeavor. And here, a skilled artisan would have found it obvious to combine any of the prior carburetor art or to simply add a flute to the Lehr device to address the binding and wedging issues discussed in the '188 patent.

A. A Claim Is Invalid Under 35 U.S.C. § 103 When It Would Have Been Obvious to a Skilled Artisan Based on a Combination of Prior Art.

An invention is obvious and “unpatentable if the differences between it and the prior art are such that the subject matter as a whole would have been obvious at the time the invention

was made to a person having ordinary skill in the pertinent art.” *Tokai Corp. v. Easton Enters., Inc.*, 632 F.3d 1358, 1366 (Fed. Cir. 2011); *Ohio Willow Wood Co. v. Alps South, LLC*, 735 F.3d 1333, 1343 (Fed. Cir. 2014). “When there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions, a person of ordinary skill has good reason to pursue the known options within his or her technical grasp. If this leads to the anticipated success, it is likely the product not of innovation but of ordinary skill and common sense. In that instance the fact that a combination was obvious to try might show that it was obvious under § 103.” *KSR Int’l Co.*, 550 U.S. at 421.

“Obviousness is a question of law based on underlying findings of facts.” *Perfect Web Tech.*, 578 F.3d at 1327. In its factual inquiry, the Court considers: (1) the scope and content of the prior art, (2) the differences between the prior art and the claims at issue, (3) the level of ordinary skill in the pertinent art, and (4) secondary considerations of nonobviousness. *Id.* (citing *KSR Int’l Co.*, 550 U.S. at 406; *Graham v. John Deere Co. of Kansas City*, 381 U.S. 1, 17 (1966)). The Court’s analysis focuses on how a person of ordinary skill in the art would interpret the prior art references. *In re Gorman*, 933 F.2d 982, 986 (Fed. Cir. 1991). Although it is a question of fact, summary judgment based on obviousness is appropriate when there are no disputed issues of material fact. *See Perfect Web Techs.*, 587 F.3d 1324 (Fed. Cir. 2009); *Media Techs. Licensing, LLC v. Upper Deck Co.*, 596 F.3d 1334 (Fed. Cir. 2010); *Ryko Mfg. Co. v. Nu-Star, Inc.*, 950 F.2d 714 (Fed. Cir. 1991). As established below, the undisputed record mandates a finding of obviousness.

B. Level of Ordinary Skill in the Art.

Here, the pertinent art is carburetor design; i.e., the design and manufacture of carburetors to establish a desired ratio of air and fuel in an internal combustion engine over a

given range of operating conditions. *See* DPFOF 199. This is undisputed. *See id.* (van Schoor Report at 18); ECF No. 34 (van Schoor Infringement Report at 11).

Feldmann's expert further opines "that one of ordinary skill in the art pertaining to the '188 Patent would hold a Bachelor's degree in mechanical engineering from an accredited university with approximately three years of experience with internal combustion engineer design including experience in the field of fluid flow." DPFOF 200. For purposes of summary judgment only, Ardisam adopts Feldmann's definition.

C. The Scope and Content of the Prior Art.

1. The Prior Art and Claims 6-15.

As noted above, Feldmann has not disputed that any of the structural limitations of claims 6-15 of the '188 patent, which recite elements of a basic carburetor using a four-fluted plunger and a disk actuator throttle mechanism, are found in the prior art. *See* DPFOF 32-33; 36-45. The Lehr 2009 reference discloses a carburetor for a propane engine having a plunger valve of the claimed length with three flutes, and the Dekni 2004 reference discloses a carburetor for a gasoline engine having a plunger valve of the claimed length with four flutes. DPFOF 59; 69; 117; 122-123; 130; 133-135.

Further, each of the disk actuator limitations of claims 7-15 can be found in any one of several prior art references. *See* DPFOF 37-45; 146-169. For example, Terakado '337, published on October 18, 2001, and issued on December 7, 2004, discloses a carburetor using a standard disk actuator throttle mechanism and needle combination to control the flow of air through the carburetor, as well as the flow of fuel out of the main jet into the mixing chamber. DPFOF 90-103; 105. Terakado also discloses a diaphragm-style fuel chamber that operates a fuel-metering plunger valve. DPFOF 78-85. Other prior art references that disclose every limitation of a standard disk-actuator mechanism as claimed in the '188 patent include: Terakado

'598; the Ruixing Disk Actuator Device; Douyama '708; Horikawa '741; Suzuki '573; Olson '694; Tobinai '931; and CN 201610805 U. DPFOF 85; 146-157.

To the extent the use of propane is found to be a limitation of these claims (which it is not, as discussed above), that too is disclosed in multiple prior art references, including Lehr 2009 and Herzer '677. DPFOF 158; 69; 130; 106. Accordingly, it is undisputed that each and every limitation of claims 6-15 is featured in the prior art.

2. The Prior Art and Claims 16-20.

Likewise, Feldmann does not dispute that all of the limitations of claims 16-20 of the '188 patent, which also recite elements of a basic carburetor using a four-fluted, fuel-metering plunger of a specific length operated by a standard diaphragm-style fuel chamber (*see supra* Background Part II.A.2.B), are found in the prior art. Again, Lehr 2009 discloses a three-fluted plunger valve of the claimed length and a diaphragm-style fuel chamber for use with a propane engine, and Dekni discloses a four-fluted plunger valve of the claimed length as well as the other structural limitations recited in claims 16-20. DPFOF 58-69; 117-138.

More specifically, the Lehr 2009 prior art reference is a carburetor in a propane, handheld string-trimmer that uses a standard diaphragm-style fuel chamber to control a three-fluted plunger having a body approximately 16.5 millimeters in length and a soft conical tip that sits in a matching conical seat. DPFOF 69; 130, 134-136. Additionally, Herzer '677 (ECF No. 29-6), which published on March 24, 2011, discloses a carburetor for a propane engine that uses a standard diaphragm-style fuel chamber to control a fuel-metering needle with a conical tip, which fits into a matching, conically shaped seat. DPFOF 70; 77; 84.⁹ To the extent Feldmann attempts to distinguish these claims on the basis of propane, this fails for the same reasons

⁹ Other prior art references disclosing standard diaphragm-style fuel chambers include: Terakado '598; Terakado '337; the Ruixing Disk Actuator Device; Suzuki '573; Horikawa '741; Tobinai '931; and Olson '694. DPFOF 85.

described above. *See supra* Part I.B. Namely, like claim 6, claim 16 (and its dependent claims) merely relies on propane as an intended use; the claims state a structurally complete device absent reference to propane. *See* DPFOF 36; 46-51. Propane is accordingly not a limitation of the claims. *See supra* Part I.B. Regardless, as propane carburetors (e.g., Lehr) existed in the prior art, this purported distinction is of no moment.

D. The Differences Between the Prior Art and the '188 Patent.

The comparison of the prior art to the asserted claims need not focus on the dependent claims (7-15 and 17-20), as Feldmann's expert agreed that there was nothing "inventive" in the dependent claims. DPFOF 203. Therefore, the art need only be compared to independent claims 6 and 16, and it is undisputed that all of the elements of claims 6 and 16 of the '188 patent are present in the prior art. *See generally* van Schoor Report. Indeed, Dr. van Schoor fails to identify a single limitation from any claim that is not taught somewhere in the prior art. *See generally id.* Rather, as noted above, Dr. van Schoor opines that the patent is non-obvious due to two misguided arguments. *See generally id.*

First, Dr. van Schoor rejects gasoline-related carburetor references on the grounds that a skilled artisan would not look to such art when working with propane. *See id.* at 13. But as addressed below, setting aside that the patent is not limited to propane, here the field of endeavor is carburetors, not *propane* carburetors. *See infra* Part II.D.1. Relatedly, Dr. van Schoor posits that a skilled artisan would not use gasoline carburetor art to solve the problem addressed in the '188 patent because the claimed carburetor was intended to be used with a propane ice auger, which must function at sub-zero temperatures. *See* van Schoor Validity Report at 16. But the patent does not claim an ice auger, nor do the claims of the patent make any reference to use of the carburetor in cold temperatures. DPFOF 16-17; 20.

Second, Dr. van Schoor posits that the prior art “teaches away” from combining various references because the prior art did not combine these references exactly as claimed in the ’188 patent. *See* van Schoor Validity Report. As described below, that the cited prior art is not identical to the claimed invention does not establish teaching away as a matter of law. *See infra* Part II.D.a. And, as Dr. van Schoor has not offered evidence to establish teaching away under the proper legal rubric, this argument too must fail. Thus, as described below, Feldmann fails to identify any basis on which to argue that the prior art does not render obvious all claims of the ’188 patent.

1. The Field of Endeavor Includes Gasoline Carburetors.

First, Feldmann flatly dismisses all prior art gasoline carburetors. But both gasoline and propane carburetors are analogous art for purposes of obviousness and must be considered by the Court. Indeed, “[w]hen the references are all in the same or analogous fields, knowledge thereof by the hypothetical person of ordinary skill is presumed.” *In re Gorman*, 933 F.2d 982, 986 (Fed. Cir. 1991). Under the law, prior art is relevant to the claimed invention where: (1) the art is in “the same field of endeavor, regardless of the problem addressed” or, (2) even when “the reference is not within the field of the inventor’s endeavor,” the art is nevertheless relevant when it “is reasonably pertinent to the particular problem with which the inventor is involved.” *In re Bigio*, 381 F.3d 1320, 1325 (Fed. Cir. 2004). “The scope of the field of endeavor is a factual determination based on the scope of the application’s written description and claims,” which is informed by the specification as a whole. *In re Singhal*, No. 2014–1704, 2015 WL 1015732, at *4 (Fed. Cir. Mar. 10, 2015) (citing *In re Bigio*, 381 F.3d at 1326).

Here, the ’188 patent specification broadly describes the field of endeavor as encompassing carburetors generally. DPFOF 205. This is apparent from the background of invention section, which discusses carburetors with a focus on existing gasoline carburetors

(DPFOF 206); the detailed description of the invention, which makes clear that the claims can be used with “volatile hydrocarbon” fuel types, which include gasoline as well as propane (DPFOF 207); and from the simple fact that numerous limitations generally claim a plunger valve and do not mention propane at all (or any specific fuel source) (DPFOF 36-51). *See Application of Wood*, 599 F.2d 1032, 1036-37 (C.C.P.A. 1979); *In re Breiner*, No. 2011-1387, 468 Fed. App. 989, 2012 WL 1631021, at *3-4 (Fed. Cir. May 10, 2012); *In re Singhal*, 2015 WL 1015732, at *4.

Moreover, here the Court need not limit its inquiry to the specification. Importantly, as noted above, Feldmann’s own expert admits that the field of endeavor is “*internal combustion engines*.” DPFOF 204 (emphasis added). Courts may rely on the opinions of experts to define the field of endeavor. *Seiko Epson Corp. v. Coretronic Corp.*, No. C 06-6946 MHD, 2010 WL 4916424, *5 (N.D. Cal. Nov. 23, 2010); *Orthopedic Equip. Co., Inc. v. U.S.*, 702 F.2d 1005, 1009 (1983). And the field of “internal combustion engines,” of course, encompasses carburetors of any kind, whether gasoline or propane. *See* DPFOF 208 (*See* Foster Report, ¶ 14).

Similarly, art is analogous if “the structure and function of the invention and the prior art is indicative that the prior art is within the inventor’s field of endeavor.” *State Contracting & Eng’g. Corp. v. Condotte Am. , Inc.*, 346 F.3d 1057, 1069 (Fed. Cir. 2003). Here, all references relied on are similar in structure and nearly identical in function. DPFOF 209-210; 117-172. Indeed, all carburetor references operate according to nearly identical functions. *See* DPFOF 52, 10.

Moreover, even if a reference is not within the relevant field of endeavor (which here is not the case), it may still be properly considered for obviousness purposes if it is reasonably pertinent to the problem facing the inventor; “that is, if it would have logically commended itself

to an inventor's attention.” *In re Singhal*, 2015 WL 1015732, at *4 (citing *In re Clay*, 966 F.2d 656, 659 (Fed. Cir. 1992)) (“If a reference is not within the relevant field of endeavor, it may still be properly considered if it is reasonably pertinent to the problem; that is, if it would have logically commended itself to an inventor's attention.”); *see also Heidelberg Druckmaschinen AG v. Hantscho Commercial Prods., Inc.*, 21 F.3d 1068, 1071 (Fed. Cir. 1994). This, also, may be shown where the analogous prior art is within the same technological field and has similar structural qualities. *Johnson v. Rea*, Civ. A. No. 1:12-cv-440, 2013 WL 1499052, *2-3 (E.D. Va. Apr. 9, 2013).

Here, all references are reasonably pertinent to the problem addressed in the '188 patent, which is primarily to design a carburetor that mixes a desired amount of air and fuel, and supply that mixture to an internal combustion engine. *See, e.g.*, DPFOF 52; 209 (Foster Report, ¶ 14 (“The '188 Patent is titled ‘Plunger Valve for a Propane Carburetor.’ It purports to address the general challenge of establishing a desired mixture of air and fuel in a carburetor, and providing that mixture to an engine over a given range of operating conditions.”)). Even if the problem to be solved is narrowed to involve only carburetors for propane engines, this narrowing would not exclude consideration of non-propane carburetor art, given that all references relied on are similar in structure and nearly identical in function to the '188 patent's claimed inventions. *See, e.g.*, DPFOF 36-51; 117-172.

Accordingly, Feldmann's flat dismissal of non-propane carburetor art is unsupported by the record, by the opinions of its own expert, and the law.

2. There Was Motivation to Add a Fourth Flute to Lehr.

Feldmann contends that a skilled artisan would not have been motivated to consider adding a fourth flute to the three-fluted plunger valve disclosed in Lehr. Of course, the Supreme Court has rejected a “rigid” application of the motivation, suggestion, or teaching inquiry, noting

that such evidence is merely “helpful” to assess the obviousness inquiry but should be viewed with some flexibility:

Often, it will be necessary for a court to look to interrelated teachings of multiple patents; the effects of demands known to the design community or present in the marketplace; and the background knowledge possessed by a person having ordinary skill in the art, all in order to determine whether there was *an apparent reason* to combine the known elements in the fashion claimed by the patent at issue. To facilitate review, this analysis should be made explicit [by the fact finder]. As our precedents make clear, however, the analysis need not seek out precise teachings directed to the specific subject matter of the challenged claim, for *a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ*.

KSR Int’l Co., 550 U.S. at 418 (emphasis added) (citation and quotation omitted). As such, “the results of ordinary innovation are not the subject of exclusive rights under the patent laws.” *Id.* at 427. Thus, the motivation to combine two or more prior art references need not be express—it may come from a variety of sources, whether explicitly shown in the prior art or implicit based on the prior art as a whole, the nature of the problem to be solved, and/or the common sense and knowledge of one skilled in the art, among other reasons. *Id.*

Indeed, an explicit teaching to combine “is rarely found in the prior art.” *In re Johnston*, 435 F.3d 1381, 1384–85 (Fed. Cir. 2006) (citations omitted). The Court accordingly must also consider various implicit teachings, “such as the field of the specific invention, the subject matter of the references, the extent to which they are in the same or related fields of technology, the nature of the advance made by the applicant, and the maturity and congestion of the field. ... the nature of the problem solved by the claimed invention, or to the knowledge of one of ordinary skill in the art.” *Id.* (citations and quotations omitted).

Applying these considerations, the Federal Circuit has found that an inherent motivation to combine prior art references is especially likely, and in some cases necessary, where such a

combination is “obvious to try” based on similar natures of problems to be solved, simpler (e.g., mechanical) technologies, and where the claimed invention chooses from a finite set of possible options to achieve predictable results. *See, e.g., Ruiz v. A.B. Chance Co.*, 357 F.3d 1270, 1276 (Fed. Cir. 2004); *Stone Strong, LLC v. Del Zotto Prods. of Fla., Inc.*, 455 Fed. Appx. 964, 969-971 (Fed. Cir. 2011). Accordingly, “where all of the limitations of the patent were present in the prior art references, and the invention was addressed to a known problem, *KSR* ... compels [a determination of] obviousness.” *Stone Strong, LLC*, 445 Fed. Appx. at 969-71 (citation and quotation omitted).¹⁰

Importantly, “if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond that person’s skill.” *KSR Int’l Co.*, 550 U.S. at 401. An invention is “obvious-to-try” and therefore invalid under 35 U.S.C. § 103 if it results from a skilled artisan merely pursuing “known options” from “a finite number of identified, predictable solutions.” *In re Cyclobenzaprine*, 676 F.3d 1063, 1070 (Fed. Cir. 2012) (quoting *KSR Int’l Co.*, 127 S. Ct. 1727) (internal quotations omitted)); *see also AstraZeneca LP v. Breath Ltd.*, No. Civ. A. 08-1512 RMB, 2015 WL 777460, at *7 (D.N.J. Feb. 13, 2015), *aff’d*, No. 2015-1335, 2015 WL 2112951 (Fed. Cir. May 7, 2015). Indeed, “[a] simple substitution of one known element for another known element in the field to obtain predictable

¹⁰ “Thus, in the appropriate case where the technology is easily understandable and the content of prior art, the scope of the patent claim, and the level of ordinary skill in the art are not in material dispute, the determination of obviousness may include ‘recourse to logic, judgment, and common sense, in lieu of expert testimony.’” *Kimberly-Clark Worldwide, Inc. v. First Quality Baby Prods., LLC*, 900 F. Supp. 2d 903, 908, 911-12 (E.D. Wis. 2012), *aff’d*, 579 F. Appx. 996 (Fed. Cir. 2014) (quoting *Wyers*, 616 F.3d at 1239); *see also Intellectual Ventures I, LLC v. Motorola Mobility, LLC*, 13 F. Supp. 3d 369, 383-84 (D. Del. 2014) (“The Supreme Court has emphasized the need for courts to value ‘common sense’ over ‘rigid preventative rules’ in determining whether a motivation to combine existed.) “[A]ny need or problem known in the field of endeavor at the time of invention and addressed by the patent can provide a reason for combining the elements in the manner claimed.” *Intellectual Ventures I, LLC*, 13 F. Supp. 3d at 383-85 (quotation omitted).

results is obvious.” *In re Lackey*, No. 2009-1532, 2010 WL 1407363, at *2-3 (Fed. Cir. Apr. 9, 2010).

The '188 patent explains that the inventor faced an issue involving “flutter in the diaphragm,” which was caused by the plunger valve “binding” within its sleeve. DPFOF 201. More particularly, the patent states that “[d]uring the previously described testing the plunger valve 615 stuck and stuttered if fewer than four flutes 815 (such as three flutes 815) were used.” DPFOF 211.

The inventor resolved this problem through trial and error experimentation, selecting from a limited set of options to arrive at a predictable solution. DPFOF 211-212. Dr. van Schoor agreed that adding a fourth flute to the plunger was one of the finite options available to address flutter in the diaphragm, the others being fix the diaphragm, use different materials, or increase manufacturing tolerances for the plunger valve. DPFOF 211-213. Dr. van Schoor also agreed that it would have been known that adding a fourth flute to the plunger valve would increase its axial alignment and therefore reduce binding; the patent itself makes no assertion that the fourth flute provided some unexpected or unanticipated result. DPFOF 211-214. Accordingly, adding a single flute to increase the stability of the plunger valve is no more than a common-sense choice among a finite set of alternatives. This does not entitle one to a patent; common sense compels a finding of obviousness. *See, e.g., In re Cyclobenzaprine*, 676 F.3d at 1070; *KSR Int’l Co.*, 550 U.S. 398; *see also Stone Strong, LLC.*, 455 Fed. Appx. at 969-971 (finding of obviousness “compelled” under such circumstances).

a. Feldmann Has Not Shown that the Prior Art Teaches Away from the Invention.

Feldmann argues that the prior art “teaches away” from using four flutes in a carburetor for a propane engine. Not so.

First, Dr. van Schoor opines that a skilled artisan would believe that an additional flute used with propane would be problematic since it would cause more friction. *See* van Schoor Report at 15-16. Setting aside that the patents are not limited to propane, “[a] reference may be said to teach away when a person of ordinary skill, upon [examining] the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken by the applicant.” *Para-Ordnance Mfg., Inc. v. SGS Importers Int’l., Inc.*, 73 F.3d 1085, 1090 (Fed. Cir. 1995). “A reference does not teach away, however, if it merely expresses a general preference for an alternative invention but does not criticize, discredit, or otherwise discourage investigation into the invention claimed.” *Galderma Labs, L.P. v. Tolmar, Inc.*, 737 F.3d 731, 738 (Fed. Cir. 2013); *In re Fulton*, 391 F.3d 1195, 1201 (Fed. Cir. 2004) (although the prior art disclosed several alternatives, it did not teach away from the claimed invention because it did not teach that the claimed invention was undesirable or ineffective); *In re Kratz Interactive Call Processing Patent Litig.*, 639 F.3d 1303 (Fed. Cir. 2011) (prior art did not teach away as it would not lead a person of ordinary skill down an errant path).

Despite invoking the doctrine of teaching away, Dr. van Schoor fails to identify a single prior art reference that expressly discourages a skilled artisan from pursuing a fourth flute in a propane carburetor, let alone a specific teaching in any such reference. *See* van Schoor Report at 15-16. As clear above, this does not meet the standard. *Para-Ordnance Manufacturing*, 73 F.3d at 1090; *Ricoh Co., LTD v. Quanta Computer, Inc.*, 550 F.3d 1325, 1332 (Fed. Cir. 2009) (no genuine issue of material fact at issue that the prior art does not teach away from the claimed invention).

Second, Dr. van Schoor opines that including an additional flute would constitute over-engineering and would create additional machining costs with no added benefit. *See* van Schoor Report at 15. Increased cost, however, is insufficient to show “teaching away” as a matter of law: “[T]he fact that the two disclosed apparatus would not be combined by businessmen for economic reasons is not the same as saying that it could not be done because skilled persons in the art felt that there was some technological incompatibility that prevented their combination. Only the latter fact is telling on the issue of nonobviousness.” *Orthopedic Equipment Co.*, 702 F.2d at 1013. Moreover, Dr. van Schoor did not identify a single reference that criticized the four-fluted plunger valve used in Dekni as being over-engineered or redundant, which he conceded in deposition. DPFOF 215.

Third, Dr. van Schoor opines that the ’188 patent is non-obvious based on the “design challenges associated with propane suitable for cold weather function.” *See* van Schoor Report at 17-18. Relatedly, Dr. van Schoor opines that there is no motivation to combine the prior art to create a propane carburetor that functions at sub-zero temperatures, as needed for ice fishing. van Schoor Report at 34. But the ’188 patent claims a carburetor; it does not claim an ice auger or a carburetor operated at particular temperatures. DPFOF 16-17; 36-51; *see also Senju Pharm. Co., Ltd. v. Lupin Ltd.*, 780 F.3d 1337, 1347 (Fed. Cir. 2015) (Many of appellants’ arguments regarding a lack of reason to combine the patents was disregarded because they were based on limitations not in the claims “and, therefore, [were] not relevant to the obviousness determination.”).

Regardless, Dr. van Schoor notes that “pressure imbalances around the plunger body will have a tendency to cant or offset the plunger in the bore,” which are caused by the use of a compressible gas such as propane. DPFOF 216 (van Schoor Report at 17). It is precisely

because of this tendency of compressible gasses to cause the plunger valve to cant or offset that a skilled artisan would try adding a flute to the plunger to increase its stability within the bore. Far from teaching away, the use of propane, if anything, would provide additional motivation for a skilled artisan to take the common-sense approach of adding a fourth, stabilizing flute, as already disclosed in Dekni.

Fourth, Dr. van Schoor argues that Lehr teaches away from using four flutes in a propane carburetor because Lehr itself only uses three flutes. *See* van Schoor Report at pp. 34. That Lehr itself had only three flutes does not “teach away” as a matter of law; prior art that is silent on an issue (i.e., the addition of a fourth flute) does not “teach away.” *Allergan, Inc. v. Apotex Inc.*, 754 F.3d 952, 964 (Fed. Cir. 2014) (“A motivation to combine may be implicit in the prior art—silence does not imply teaching away.”); *Para-Ordnance Mfg.*, 73 F.3d at 1090.

Finally, Dr. van Schoor argues that one of skill in the art would not employ the claimed plunger length in a propane carburetor. *See* van Schoor Report at 31-34. Again, Dr. van Schoor fails to identify any specific art that would discourage one of skill from using a valve of the claimed length. *See id.* Regardless, this argument is readily debunked by the prior art itself: Lehr, a carburetor for a *propane* engine, contains a plunger valve that falls within the lengths claimed in the ’188 patent—approximately 16.5 mm (as the patent defines that term). DPFOF 133-134.

E. Secondary Considerations Cannot Save the ’188 Patent Claims.

Finally, as part of the Court’s obviousness analysis, it must consider secondary considerations of non-obviousness. This includes, but is not limited to, long-felt and unmet need, commercial success, failure of others, and industry praise. *Graham*, 383 U.S. at 17; *Asyst Techs., Inc. v. Emtrak, Inc.*, 544 F.3d 1310, 1316 (Fed. Cir. 2008). On March 2, 2015, Ardisam served an interrogatory requesting that if Feldmann contends that “the validity of any claim on

the '188 patent is supported in whole or in part by any evidence of non-obviousness, including evidence of one or more 'secondary considerations' or 'objective indicia' of non-obviousness, [Feldmann] identify the factual and legal basis for each such contention, and identify all documents in support of or against such contention.” DPFOF 217. Feldmann responded that it would “disclose any positions regarding invalidity when it discloses its expert report on invalidity in accordance with the Court’s scheduling order.” DPFOF 218.

On April 30, 2015, Feldmann served the Responsive Expert Report of Dr. Marthinus van Schoor Regarding the Validity of Feldmann’s '188 Patent. DPFOF 220. This report is devoid of any discussion of secondary considerations. DPFOF 220. Indeed, in a 41-page report, Feldmann does not make a single argument that the '188 patent is not obvious due to secondary considerations. DPFOF 220. Dr. van Schoor confirmed in his deposition that he did not identify any secondary considerations of non-obviousness. DPFOF 221.

Because Ardisam has put forth a convincing obviousness case, and Feldmann has failed to put forth a shred of secondary evidence (let alone evidence sufficient to disrupt a finding of obviousness), Ardisam is entitled to summary judgment of obviousness.

III. PLAINTIFF HAS FAILED TO ADDUCE ANY EVIDENCE TO SUPPORT A FINDING OF WILLFUL INFRINGEMENT.

Lastly, Ardisam is entitled to summary judgment of no willful infringement because Feldmann has failed to adduce *any* record evidence that would meet the Federal Circuit’s burden to establish willful infringement. Indeed, 35 U.S.C. § 284 allows a patentee to recover up to three times compensatory damages if a patentee can prove that the alleged infringer’s infringement was willful. Willful infringement is a two-part analysis. First, the patentee must prove by “clear and convincing evidence that the infringer acted despite an objectively high likelihood that its actions constituted infringement of a valid patent.” *In re Seagate Tech., LLC*,

497 F.3d 1360, 1371 (Fed. Cir. 2007). Only if the first prong is met does the Court then consider whether the patentee has proved that the “objectively-defined risk ... was either known or so obvious that it should have been known to the accused infringer.” *Id.*

Although willfulness is a factual inquiry, the “objective determination of recklessness ... is best decided by the judge as a question of law” *Bard Peripheral Vascular, Inc. v. W.L. Gore & Assocs., Inc.*, 682 F.3d 1003, 1006-07 (Fed. Cir. 2012). The objective program cannot be met where the accused infringer relies on reasonable defenses. *Spine Solutions, Inc. v. Medtronic Sofamor Danek USA, Inc.*, 620 F.3d 1305, 1319 (Fed. Cir. 2010) (defendant “raised a substantial question as to the obviousness of the ... patent” therefore defendant “was not objectively reckless in relying on [the] defense”).

First, as to the objective prong, Feldmann does not dispute that Ardisam’s obviousness defense is objectively reasonable. *See* DPFOF 188. Rather, Feldmann’s only argument that Ardisam acted despite an objectively high likelihood that Ardisam’s actions constituted infringement is that “Ardisam has produced no prior art *anticipating* the asserted patent claims but instead relies on an argument that these claims are obvious.” DPFOF 188 (emphasis added). This is demonstrably false. As explained above, in the March 31, 2015, Expert Report of Dr. David E. Foster, and the April 8, 2015, First Supplement to Expert Report of Dr. David E. Foster, Ardisam provided its invalidity positions based on both anticipation and obviousness. DPFOF 223; *see supra* Part I.

Regardless, Ardisam was not required to produce evidence of anticipation; a reasonable obviousness defense defeats a showing of willfulness. *Halo Electronics, Inc. v. Pulse Electronics, Inc.*, 769 F.3d 1371, 1382-83 (Fed. Cir. 2014) (Federal Circuit upheld the district court’s finding of no willful infringement because accused infringer raised a substantial question

as to the obviousness of the patent-in-suit. After reviewing the record as a whole, the Federal Circuit agreed with the district court that the “obviousness defense was not objectively unreasonable.”). Feldmann has thus failed to meet the first prong of *In re Seagate*. See *Univ. of Pittsburgh v. Varian Med. Sys., Inc.*, 561 Fed. Appx. 934, 943 (Fed. Cir. 2014) (Seventh Circuit vacated the trial court’s willfulness finding because defendant’s “unsuccessful invalidity defense based on [a piece of prior art] was not objectively unreasonable.”).

Second, Feldmann has failed to identify a shred of subjective evidence of willfulness. Feldmann asserts that Ardisam was subjectively willful for three reasons. First, Feldmann presses subjective willfulness because Ardisam did not concede infringement until the day its expert report on non-infringement was due. See Brooks Decl. Ex. 10 (Feldmann Engineering & Manufacturing Co., Inc.’s Response to Ardisam’s First Set of Interrogatories at No. 6). This argument does not pass muster. Ardisam’s litigation strategy says nothing of whether, pre-litigation, it was aware of the patents and behaved in a subjectively unreasonable manner. *In re Seagate*, 497 F.3d at 1374 (“[A] willfulness claim asserted in the original complaint must necessarily be grounded exclusively in the accused infringer’s pre-filing conduct.”); *Gustafson, Inc. v. Intersystems Indus. Prods., Inc.*, 897 F.2d 508, 511 (Fed. Cir. 1990) (“a party cannot be found to have ‘willfully’ infringed a patent of which the party had no knowledge”); see also *Netgear Inc. v. Ruckus Wireless Inc.*, Civ. No. 10-999-SLR, 2013 WL 1124036 at *1 (D. Del. Mar. 14, 2013) (The court dismissed the plaintiff’s willfulness claim as plaintiff’s only support was the filing of the lawsuit itself. That did not meet the pre-litigation conduct requirement per *In re Seagate*).

Feldmann next posits that Ardisam is subjectively willful because Ardisam “continues to market and sell products that infringe the ’188 patent” See Brooks Decl. Ex. 10 (Feldmann

Engineering & Manufacturing Co., Inc.’s Response to Ardisam’s First Set of Interrogatories at No. 6). This is irrelevant. Evidence of willful infringement must be based on the accused infringers pre-filing conduct. *In re Seagate*, 497 F.3d at 1374 (“a willfulness claim asserted in the original complaint must necessarily be grounded exclusively in the accused infringer’s pre-filing conduct.”). Indeed, a patentee must have a “good faith basis” for alleging willful infringement in the first place. *Id.*; *see also* Fed. R. Civ. P. 8, 11(b). As such, Feldmann cannot assert Ardisam’s sales of the accused product *after* the filing of the lawsuit as evidence of willful infringement.

Finally, Feldmann argues that “Ardisam went to Feldmann’s supplier in China to purchase the same carburetor Feldmann uses in its propane ice-augers, the design of which incorporates the inventions claimed in the ’108 [sic] and is covered by the claims in the ’108 [sic] patent.” *See* Brooks Decl. Ex. 10 (Feldmann Engineering & Manufacturing Co., Inc.’s Response to Ardisam’s First Set of Interrogatories). Ardisam concedes that it uses Ruixing Carburetor Manufacturing Co., Ltd. to manufacture its carburetors. However, Feldmann has failed to provide any evidence that Ardisam even had knowledge of the ’188 patent before the filing of this lawsuit. DPFOF 224 (Brooks Decl. Ex. 10 (Feldmann Engineering & Manufacturing Co., Inc.’s Response to Ardisam’s First Set of Interrogatories at No. 6) (“Ardisam was aware of the ’108 [sic] patent no later than the date it was served with this lawsuit.”)). This, too, is fatal to its claim. *See In re Seagate*, 497 F.3d at 1374. As Feldmann has failed to provide any evidence of willful infringement, Ardisam is entitled to summary judgment of no willful infringement.

CONCLUSION

For the foregoing reasons, Ardisam respectfully asks the Court to grant summary judgment that Feldmann's '188 patent claims 6-20 are invalid and/or that Ardisam's infringement of those claims was not willful.

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